

BEFORE THE  
PUBLIC SERVICE COMMISSION OF WISCONSIN

Application of Wisconsin Electric Power Company for  
Approval of Electric Vehicle Charging Pilots

Docket No. 6630-TE-XXX

**WISCONSIN ELECTRIC POWER COMPANY'S APPLICATION FOR APPROVAL OF  
ELECTRIC VEHICLE CHARGING PILOTS**

Pursuant to Wisconsin Statutes Sections 196.19 and 196.20, Wisconsin Electric Power Company ("Wisconsin Electric" or the "Company") submits this application and accompanying proposed tariffs<sup>1</sup> to the Commission, requesting the Commission's approval of three new electric vehicle ("EV") charging pilot programs that mirror the programs the Commission recently approved for Northern States Power Wisconsin ("NSPW") in Docket 4220-TE-104. In addition, the Company is proposing some program options to bring the benefits of electrified transportation to underserved communities in its service territory. Through these programs, WEC Energy Group ("WEC") would like to install up to \$50 million in EV charging equipment and supporting electric distribution infrastructure in its Wisconsin electric service territories over the next five years.

The scope of WEC's proposed pilot reflects the Company's commitment to meet its customers' demands for safe, reliable and cost effective energy in all aspects of their businesses and lives, including transportation. Electric utilities across the country are working to provide EV charging infrastructure in cities and communities to help deliver greater transportation options where they serve. According to a recent report by the Edison Electric Institute, 48 electric utilities in 26 states and the District of Columbia have obtained approval for EV programs representing a total investment of more than \$1.5 billion, with an additional 22 utilities in 17 states awaiting action on proposals involving another \$1.4 billion in investments.<sup>2</sup>

Like the EV charging pilot programs the Commission recently approved for NSPW, WEC's pilot EV tariffs are intended to further the Commission's interest in policies to expand the use of electricity in transportation and to address barriers to increased EV penetration in Wisconsin that were identified by the Commission in its Docket 5-EI-156.

Consistent with the pilot EV tariffs approved in Docket 4220-TE-104, Wisconsin Electric's pilot EV tariffs provide options for all customers by providing the charging infrastructure needed to support the electrification of transportation in Wisconsin. Under both proposed residential EV tariff options, Wisconsin Electric will own and maintain smart chargers on customer premises and customers will pay the Company a fixed monthly service and administration charge. Customers can pay for the charger either by prepaying the cost up front or

<sup>1</sup> Attachment A-Residential tariffs and Attachment B-Commercial tariff

<sup>2</sup> EEI *Electric Transportation Biannual State Regulatory Update* (June 2020).

paying for the charger over time through a higher fixed monthly service and administration charge. Under the first residential EV tariff option, the Charger-Only EV Program, customers on Wisconsin Electric's standard residential rates will charge their EV on a new three-tier Time of Use ("TOU") rate and keep the rest of their household consumption on standard rates. Under the second residential EV tariff option, the Whole House EV Program, customers who are currently taking service on Wisconsin Electric's existing two-part TOU rate will have their EV charging load and the rest of their load on that TOU rate.

Wisconsin Electric also proposes a pilot program for commercial customers that is similar to the program approved in Docket 4220-TE-104. In addition to implementing a revenue-based allowance to offset the upfront costs of distribution system improvements needed to provide service to larger charger installations, Wisconsin Electric will provide larger customers with the option of having the Company provide chargers with the cost prepaid or recovered through a monthly charge. Commercial customers will also be eligible for rebates, deferred by the utility into a regulatory asset for recovery in future rates, up to any portion of the revenue-based extension allowance that remains after application of the Company's service extension costs, to offset the cost of "make ready" equipment needed to provide service from the customer's meter to the charging equipment.<sup>3</sup>

In all respects, the proposed EV charging programs are designed to recover the incremental service costs from the customers participating in the pilot, with no cross-subsidization by non-participating customers. Wisconsin Electric will accept all conditions placed on the EV charging programs approved in Docket 4220-TE-104. Wisconsin Electric will be issuing RFPs for charging equipment and operation and maintenance services and will keep the Commission apprised of progress on implementing the pilot EV programs.

Finally, Wisconsin Electric would like to offer some policy options under the proposed pilot that would seek to deliver the benefits of EVs to underserved areas of its service territory. The Company proposes a number of program options for the Commission's consideration and approval, including utility investments in charging infrastructure for municipal fleets and public transit, utility-owned charging hubs for public use at transit stations and ridesharing locations, utility-funded rebates for charging infrastructure projects sponsored by municipalities or non-profit agencies, and using earnings sharing funds to provide grants for such projects. Through some or all of these programs, underserved communities can obtain at least some of the benefits of electrified transportation.

## **I. Proposed Residential EV Pilot Programs**

### **a. Background**

Wisconsin Electric proposes two new pilot programs to expand the availability and affordability of EV charging for residential customers. As the Commission is well aware, limited access to charging infrastructure remains a significant hurdle to more rapid EV adoption in

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<sup>3</sup> This aspect of Wisconsin Electric's Commercial EV Pilot Program is different than the NSW program, in which the utility would own and maintain make ready equipment on the customer side of the meter. As explained below, Wisconsin Electric's approach reduces this barrier to entry without utility ownership of the equipment.

Wisconsin. The Commission's Investigation of Electric Vehicle Policy and Regulation (Docket 5-EI-156) identified several barriers to increasing EV penetration in Wisconsin including (1) a lack of awareness on EVs and EV infrastructure; (2) upfront costs for charging equipment; and (3) insufficient price signals on when to charge. Wisconsin Electric's proposals address all three of these barriers by making it easier and less costly for residential customers to install EV charging equipment and broadening the availability of TOU rates specific to EV charging.

Wisconsin Electric has modeled this Application on the proposed residential EV programs that the Commission recently approved for NSPW in Docket 4220-TE-104. Wisconsin Electric decided to model its programs on NSPW's because the Commission has recent familiarity with them and approved them after extensive analysis and discussion. In addition, in Docket 5-UR-109, the Commission recently rejected a proposal by Wisconsin Electric to conduct a Residential Electric Vehicle ("REV") pilot. The proposed pilot would have offered rebates of up to \$1,000 per customer to install an EV charger in their homes, and would have required participating customers to enroll in a TOU rate. The REV pilot would have required customers to install a second meter at their homes, at additional cost. The Commission rejected the REV pilot on a 2-1 vote, finding in particular that Wisconsin Electric had not adequately substantiated the estimated costs of installing chargers to support the proposed rebate amount.

Wisconsin Electric's proposed residential programs, which are identical in all material respects to NSPW's approved programs, will: (1) provide customers an affordable solution for charging their EVs, avoiding the need for additional meters (2) avoid cross-subsidization; and (3) efficiently manage load by encouraging charging during off-peak hours. Based on Wisconsin Electric's own research and experience as well as the experience NSPW drew from its sister utility's EV pilot programs in Minnesota,<sup>4</sup> Wisconsin Electric is confident that its programs will provide customers safe, cost-effective and reliable service on transparent terms. By introducing these programs on a pilot basis, Wisconsin Electric will be able to gather information necessary to validate these assumptions and expand EV charging offerings in the future, including any necessary modifications identified during the pilot.

#### b. Program design

Like NSPW's residential programs, Wisconsin Electric proposes to create two separate programs for residential customers. The "Charger-Only EV Program" will permit customers who currently take service under Wisconsin Electric's standard residential or farm rates (Rg-1 or Fg-1) to obtain an EV charger and take service for it under a new three-part TOU rate specially designed for EV charger load. The remainder of the customers' load will remain on the standard rate. The "Whole House EV Program" will allow customers currently on Wisconsin Electric's existing two-part TOU rate (Rg2) to obtain a charger and take service for the additional load under that rate as well. Because of metering limitations, net metering customers will not be eligible to participate in the Charger-Only EV Program, but may participate in the Whole House EV Program. The costs that Wisconsin Electric will assess participating customers will pay the Company's actual costs of operating the EV programs, so non-participating customers will not be forced to subsidize participating customers.

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<sup>4</sup> Northern States Power Company, a Minnesota corporation, Docket No. E002/M-17-817.

Wisconsin Electric will provide customers with the EV charging equipment under the residential EV programs. Customers will have the option of paying for the charging equipment and installation upfront or in a bundled fixed monthly service and administration charge. Customers who choose the “bundled” option will pay a higher fixed monthly charge, since they will be paying off the cost of the charging equipment and installation over the term of their service agreement.

The charging equipment installed under either tariff will be the property of Wisconsin Electric, and the Company will maintain it for as long as the customer participates in the tariff. The term of the agreement for customers who choose the “bundled” option for paying for the charger and installation will be ten years, which is designed to coincide with the time it will take to recoup the cost of the equipment and installation through monthly charges. At the end of the ten-year term, customers who choose the bundled option will be allowed to sign a new ten-year contract, under which Wisconsin Electric will continue to own and maintain the existing charger or replace it, if necessary. If these customers leave the program in less than ten years, they will be charged a \$200 removal fee and Wisconsin Electric will maintain ownership of the equipment. Wisconsin Electric will not allow these customers to purchase equipment when they withdraw from the tariff. Chargers that are returned to the Company before the end of their useful life may be redeployed to other customers taking service under the “bundled” option.

For customers who choose to prepay for the charging equipment and its installation, Wisconsin Electric will transfer ownership of the equipment to them when they withdraw from the program. These customers may remain enrolled in the tariffs for as long or as short a period of time as they like. Because they will have paid for their equipment upfront, early withdrawal will not harm non-participating customers.

Wisconsin Electric’s residential EV charging rates will be available to residential and farm customers who own and live in single-family homes, townhomes, duplexes, and other multi-family dwellings with separately metered service.<sup>5</sup> Other terms of participation will include:

- Eligible customers must receive residential or farm electric service from Wisconsin Electric with no past-due bills;
- Eligible customers must own or lease an EV at the time they enroll in the program;
- Eligible customers must have Wi-Fi service adequate to support data collection and transmission from the EV charger to the Company for billing support; and
- The site must have sufficient space to place and allow the Company to maintain the charging equipment.

By participating in the EV tariffs, customers will agree to:

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<sup>5</sup> While this will mean that the programs are not immediately available to *all* residential customers, Wisconsin Electric will continue to explore programs and tariffs that could support the charging needs of customers living in multi-family dwellings. One potential strategy may be the development of utility-owned charging hubs in low income and underserved areas, as discussed in Section III of this Application.

- Participate in customer surveys and provide feedback about the programs;
- Provide access and assistance to facilitate equipment testing;
- Provide information allowing the Company to analyze energy use, vehicle charging patterns, and reactions to vehicle charging load management activities.
- Customer vehicle charging sessions will be subject to interruption and power reduction;
- Be responsible for routine inspection, maintenance, and troubleshooting not requiring technicians (*e.g.*, resetting the circuit breaker); operations and maintenance of the charging equipment requiring technician support will be accomplished by qualified contractors hired by the Company and coordinated with the customer
- Receive communications from the Company related to the programs.

Wisconsin Electric proposes to limit its residential EV pilot programs to an aggregate of 7,500 customers. Wisconsin Electric also proposes to file to continue, modify, expand, replace or close out its EV charging programs no later than the fifth anniversary of the Commission’s issuance of an order in this case. Such a requirement would be consistent with the Commission’s order in Docket 4220-TE-104.

c. EV pilot tariff rates

i. *Fixed monthly service and administration charge*

Customers will pay a fixed monthly service and administration charge that reflects the actual costs of operating and maintaining the EV charging equipment and of administering the residential EV program. The monthly charge will be higher for customers who choose to pay for their charger and installation over time under a “bundled” rate. Table 1 shows the estimated monthly costs, including the proposed fixed monthly charges.

**Table 1 - Wisconsin Electric Home Smart Charging Equipment Options**

<b>Rate Options</b>	<b>Monthly EV Customer Charge</b>	<b>Monthly EV Energy Costs</b>	<b>Monthly EV Total Costs</b>
<b>Customer-Provided Charger Options</b>			
Standard Residential/Farm Service (Rg-1/Fg-1)	\$0	\$48	\$48
Time of Day Residential Service (Rg-2)	\$0	\$35	\$35
<b>Company-Provided Charger Options</b>			
Charger Only EV Program (COEV-R) Prepay	\$9	\$28	\$ 37
Charger Only EV Program (COEV-R) Bundled	\$18*	\$28	\$ 46*
Whole House EV Program (WHEV-R) Prepay	\$5	\$35	\$ 40
Whole House EV Program (WHEV-R) Bundled	\$14*	\$35	\$ 49*

\* Includes the cost of “Level 2” charging equipment.

These fixed monthly charges are designed to fully cover the costs of administering the EV programs and, in the case of the “bundled” customer charges, the costs of the charger and installation. The cost of the Level 2 charger provided to residential customers is estimated to be \$800, including installation costs. Wisconsin Electric will conduct a Request for Proposals (“RFP”) before rolling out the EV programs to secure competitive pricing for chargers and installation.

The customer charges for these pilot programs are based on currently-known and anticipated equipment and program administration costs. If these costs change after the EV programs are available to customers, Wisconsin Electric may seek permission to change the customer charges in a rate case or standalone filing. For example, it is possible that installation costs may change depending on where the customers who opt into the program live. If a larger percentage of the customers are rural, then travel costs for installers may increase. To take another example, data service charges from vendors may change in the future. Additionally, as better technology becomes available, the Company will assess whether enhanced functionalities such as demand management or wireless charging would be beneficial for customers and the utility. If so, and if that technology affects equipment, installation or maintenance costs, Wisconsin Electric might seek to revisit the customer charges.

The EV programs will simplify and provide cost certainty with respect to charger maintenance, since the Company will pay for all necessary maintenance while customers are enrolled in the EV charging programs. Customers will be responsible for the full cost of premises wiring and permits. However, the Company’s relationships with installers will simplify customers’ experience with obtaining premises wiring because they will be able to contract with the Company’s installers to do the wiring at the same time they are installing the charger.

## *ii. Energy charges*

Wisconsin Electric proposes a new time of use (“TOU”) rate for the Charger-Only pilot program. Again, this pilot will be available only to Wisconsin Electric customers who are currently on the standard rates Rg1 and Fg1.

This new TOU rate is designed especially for EV charging load and will allow the Company to send very precise price signals to customers to encourage them to charge their EVs when demand on the system is otherwise low, thus flattening the demand curve. These more precise price signals are made possible by the charger’s capability to measure usage in 15 minute intervals. The proposed three-part rate for the Charger-Only pilot reflects the cost of generating and supplying electricity during different seasons and times of day. It is based on the cost to serve all residential customers, not just EV customers. The three time periods are based on the estimated hourly system loads and marginal energy costs, with on-peak periods reflecting the highest system cost hours. Wisconsin Electric also considered convenience and simplicity in designing the rate, and prioritized making it easy for customers to understand. Customers who opt for the Charger-Only program will continue to take service for the remainder of their household load under the flat Rg1 or Fg1 rate. Tables 2 and 3 below compare the new three-part TOU rate design to the Company’s existing TOU rate.

**Table 2 – Rate Design**

Cents / kWh	Time-of-Use (RG-2)	EV Time of Use (COEV-R)
<b>Summer</b>		
On-Peak	19.625	26.357
Intermediate	Not Applicable	15.140
Off-Peak	8.868	6.634
<b>Non-Summer</b>		
On-Peak	19.625	15.140
Intermediate	Not Applicable	15.140
Off-Peak	8.868	6.634

**Table 3 – TOU Time Periods**

	Time-of-Use (Rg-2)	EV Time of Use (COEV-R)
<b>Summer</b>		
On-Peak	7 AM – 7 PM 8 AM – 8 PM 9 AM – 9 PM 10 AM – 10 PM Excluding Weekends and Holidays	12 PM (Noon) – 8 PM Excluding Weekends and Holidays
Intermediate	Not Applicable	8 AM – 12 PM (Noon) 8 PM – 12 AM (Midnight)
Off-Peak	7 PM – 7 AM 8 PM – 8 AM 9 PM – 9 AM 10 PM – 10 AM Weekends and Holidays	12 AM (Midnight) – 8 AM
<b>Non-Summer</b>		
On-Peak	7 AM – 7 PM 8 AM – 8 PM 9 AM – 9 PM 10 AM – 10 PM Excluding Weekends and Holidays	Not Applicable
Intermediate	Not Applicable	8 AM – 12 AM (Midnight)
Off-Peak	7 PM – 7 AM 8 PM – 8 AM 9 PM – 9 AM 10 PM – 10 AM Weekends and Holidays	12 AM (Midnight) – 8 AM

The three-part TOU rate is based on three components – energy, production and distribution. Energy costs include fuel and variable production costs which are allocated to each hour of the year by the marginal energy 8760 allocator. Production costs include fixed

production and one-half of transmission costs, which are allocated to each hour of the year by the average and excess method. Distribution costs include distribution, the remaining transmission costs, and remaining costs necessary to meet the class revenue requirement, all of which is allocated by the average and excess method. The average and excess method allocates the average load proportion of costs to all hours, and excess load proportion of costs to the intermediate- and on-peak hours. Table 4 shows rates by the three components. Allocations are based on the Company's Class Cost of Service Study from docket 5-UR-109.

**Table 4 - EV - TOU Rate Development**

<b>Cents / kWh</b>	<b>Total</b>	<b>Energy</b>	<b>Production</b>	<b>Distribution</b>
Total	14.086	3.476	7.208	3.403
On-peak	26.357	4.262	15.010	7.086
Intermediate-peak	15.140	3.515	7.8979	3.728
Off-peak	6.634	3.066	2.424	1.144
Costs Included		Fuel, Variable Production and Transmission	Fixed Production and Transmission	Distribution
Allocation Method		Marginal, LMP-Weighted Energy	Average and Excess	Average and Excess

Customers on the Whole House EV Program will take service under Rg 2, Wisconsin Electric's existing two-part TOU rate, and pay the energy rates under that tariff. Table 5 shows the times of use and facilities and energy charges for this rate; the fixed monthly service and administration charge for the EV charging program will be added to the existing facilities charge.

**Table 5 - Monthly Energy-Only Bill By Monthly kWh**

	<b>150</b>	<b>275</b>	<b>350</b>	<b>425</b>	<b>500</b>
Rg-1 (Residential Service)	\$21	\$38	\$48	\$58	\$69
Rg-2 (Residential Service - Optional TOU)	\$15	\$27	\$35	\$42	\$50
Charger Only EV Program (COEV-R)	\$12	\$21	\$28	\$33	\$39
Whole House EV Program (WHEV-R)	\$15	\$27	\$35	\$42	\$50

*iii. Estimated customer savings*

Wisconsin Electric estimates that customers will save money by enrolling in one of the EV charger residential programs when compared to charging their EVs on either non-TOU residential or farm rates, or current TOU rates. First, customers will save the approximately \$2 / month cost of installing a second meter, which is required today. Second, customers will be able to take advantage of the pricing that will be negotiated by Wisconsin Electric for the charger itself and for installation. Third, by charging at the least-cost time under the proposed three-part TOU rates, customers will save on the energy cost of charging their EVs.



#### d. Equipment and Customer Experience

Wisconsin Electric will conduct an RFP for both charging equipment and installers. The Company will have certain requirements for each, which are described here.

The EV charging equipment for residential customers will include a Level 2 smart charger capable of measuring load in 15-minute intervals and transmitting that data using the customer's WiFi. The vendor will be responsible for transmitting consumption information to Wisconsin Electric for billing purposes and to inform potential further development of the EV programs. This information will be transmitted daily, in a standard format using a secure and encrypted process. In sourcing the equipment, Wisconsin Electric will require certain minimal functional requirements, including the following:

- Metering and billing accuracy of plus or minus 2 percent;
- Ability to retrieve 15-minute interval energy usage data;
- Secure data transfer between the customer and Wisconsin Electric;
- Secure onboard data storage for 15 minute interval data for minimum of 90 days;
- 10 watt standby power consumption maximum;
- Charging device must be UL Listed;
- Compatible metering data format (XML, MV90, OCPP and CNMP);
- Certain administrative privileges that enable the Company to access charging data and to receive information from the charger; and
- Editing controls that prevent data tampering.

Wisconsin Electric will also conduct an RFP for installers. Some of the qualities that the Company will require from selected installers include:

- Demonstrated record of high customer satisfaction;
- Extensive experience installing EV charging equipment;
- Existing footprint allowing effective coverage of Wisconsin Electric's service territory;
- Competitive rates; and
- Ability to troubleshoot charging equipment and ensure full functioning, including connecting chargers to WiFi network.
- Ability to work with the Company's Customer Care team to facilitate a seamless customer experience.

Customers will enroll in the EV pilot by contacting the Company's customer care center<sup>6</sup>. After they do, and their eligibility has been verified, they will be contacted by the Company's care center to coordinate installation of the charging equipment by one of the Company's contracted installers. Having installation completed by the Company's contracted installers will reduce inconvenience and legwork for customers by saving them from having to research installation on their own. It will also ensure that installations are high-quality and that required

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<sup>6</sup> As part of the pilot program, the Company will also seek to identify and implement other channels that customers could use to enroll in the pilot.

permitting and safety protocols are followed. Installers will program the customer's charger to default to charging during off-peak hours under the applicable TOU rate.

As noted above, customers will be responsible for the cost of premises wiring. However, the Company's contracted installers will provide a bid for that work, which customers may find easier than contracting with another electrician. Again, having premises wiring completed by contracted installers will ensure quality control and that necessary permits are obtained.

e. Load management

One of the principal benefits of the chargers that will be installed under the EV programs is that they can be set to charge at specific times to take advantage of TOU rates, and help to flatten Wisconsin Electric's demand curve. Wisconsin Electric will program the chargers to charge off-peak beginning at midnight, while giving customers the ability to override this default charging schedule. NSPW found that defaulting to earlier charging (*e.g.*, at 9:00 P.M.) resulted in a secondary peak because the charging load coincided with other evening household loads. By making the default charge time midnight, Wisconsin Electric anticipates that it will avoid any such issues. The charging equipment will also have direct load management and load control capabilities. The proposed tariffs contain provisions that will allow Wisconsin Electric to test load management of EV charging to assist it in designing potential managed EV charging programs in the future.

f. Marketing the EV programs

Costs for marketing and administering the EV pilots will be incorporated into program pricing, and recovered through the proposed fixed monthly service and administration charge. This is anticipated to include staff time, marketing and communications expenses. Wisconsin Electric will pursue customers through targeted outreach to potential participants. The Company will develop print materials and an informational website to communicate to customers about the EV pilots and opportunities to participate.

g. Reporting obligations

Wisconsin Electric proposes to adopt the reporting requirements that the Commission ordered with respect to NSPW's EV tariffs. These requirements are designed to provide the Commission with information necessary to ensure that the EV programs achieve their goals and do not result in cross-subsidization by non-participating customers. These annual reporting requirements are:

- Number of customers and selected options (bundled vs. prepay);
- Total amount of electricity sold by time of day;
- Program budgeting and spending; and
- Survey results regarding customer satisfaction and installation experiences.

In addition, the Commission imposed the following biannual reporting requirements for NSPW's programs, to which Wisconsin Electric also agrees:

- Aggregated interval data;
- Analysis of customer cost savings; and
- Analysis of load management.

h. Accounting and regulatory treatment

As approved by the Commission with respect to NSPW's programs, Wisconsin Electric proposes to record all Charger-Only charging equipment in Federal Energy Regulatory Commission (FERC) Account 101 Plant In Service (FERC Plant Account 370 Meters) and all Whole House charging equipment in FERC Account 101 Plant In Service (FERC Plant Account 371 Installations on Customers' Premises). Prepaid equipment costs for both programs would be recorded with a value of \$0, as the equipment would be prepaid by the customer. Customers who choose the bundled option would have their equipment recorded at cost in plant. Depreciation expense would be recorded to FERC Account 403 Depreciation Expense, and Wisconsin Electric proposes to record cost in the same manner as other mass distribution assets. Assets purchased would be capitalized as an electric distribution asset to FERC Account 101 and would be further classified into FERC Plant Account 370 or 371 in vintage groups for the purpose of depreciation rather than as individual equipment.

Wisconsin Electric also proposes to work with Commission Staff to develop additional accounting procedures to ensure that program costs and revenues are appropriately tracked and that there is no cross-subsidization from non-participating customers. This is consistent with the Commission's order in Docket 4220-TE-104.

Wisconsin Electric is not seeking deferral treatment of the costs of the proposed Residential EV Pilot Programs. The Company does not expect substantial net cost impacts between now and the Company's next rate case. As discussed above, the pilot programs are designed to fully compensate Wisconsin Electric and avoid cross-subsidization, so there is not a significant concern that non-participating customers will have to pay for participating customers' charging equipment in the interim. Wisconsin Electric proposes to address cost recovery for the pilot programs in its next rate case.

i. Administrative Code waiver requests

Wisconsin Electric seeks the same administrative code provision waivers relating to billing, customer complaints, and metering requirements as were granted to NSPW in Docket 4220-TE-104, along with the corresponding waivers to Wisconsin Electric's existing tariffs, as necessary. To the extent the Commission identifies any other sections of the administrative rules or Wisconsin Electric's tariffs that conflict with its proposal, the Company requests that the Commission waive those provisions as well.

## **II. Proposed Commercial EV Pilot Program**

### **a. Background**

Wisconsin Electric proposes to implement a revenue-based allowance for distribution system upgrades necessary to serve commercial customers' larger EV charger installations, similar in design to the allowance that the Commission approved in Docket 4220-TE-104. The revenue-based allowance formula will calculate an extension allowance that is equal to the incremental distribution demand revenues from the expected load growth from the charger installation. Commercial customers will also have the option of purchasing charging equipment from Wisconsin Electric, and paying the costs of purchasing, installing, operating and maintaining the charger through a fixed monthly charge. They will also have the option of receiving a rebate from Wisconsin Electric to offset all or a portion of the cost of installing the customer-owned "make ready" equipment necessary for service between the customer's meter and the charging equipment. The amount of the rebate will be capped at the lower of the actual reasonable make ready costs or the portion of the allowance in excess of the extension costs. Because (1) the revenue-based allowance will be based on the incremental distribution revenue (2) the make-ready rebate will be capped at the remaining revenue-based allowance, and (3) the charger costs will be recovered through a monthly charge, the Commercial EV Program will not result in cross subsidization from non-participating customers.

### **b. Program design**

The Commercial EV Program will be available to medium and large customers adding incremental load served on rate schedules Cg 1, Cg 2, Cg 3, Cg 3S, Cg 3C, Cg 6, Cp 1, Cp FN, Cp 3, Cp 3S, and Cp 4. Consistent with NSPW's commercial program, customers must be served through a dedicated service for charging electric vehicles and must maintain a minimum of four ports, or, if there are fewer than four ports, a minimum 50kW of estimated incremental load above the customer's historical Demand Baseline for one out of 12 months of each of the contract service years. Participation in this program will initially be capped at 100 MW of new customer load on Wisconsin Electric's system.

A customer's Demand Baseline for purposes of the Commercial EV Program will be determined consistent with the method Wisconsin Electric uses to measure baselines for commercial rates. The customer's historical distribution demand level from a recent 12-month period will be established in the service contract and will be used to establish the Demand Baseline for the term of the contract. The Demand Baseline for new customers will be zero. Wisconsin Electric will have the discretion to adjust the Demand Baseline to address non-recurring anomalies in historical usage and to account for a customer's demand management activities. All usage – both up to and above the Demand Baseline – will be billed at the customer's applicable standard tariff rate.

### **c. Revenue-based extension allowance**

Line extension costs can be a significant barrier to the installation of commercial-scale fleet EV charging. Customers installing new EV chargers will receive an extension allowance

toward the distribution system improvements Wisconsin Electric must make to serve the incremental charging load. This allowance will be the larger of the allowance under the Company's existing extension rules or the revenue-based allowance under the proposed Commercial EV Program.

Wisconsin Electric's existing extension rules reduce the cost of extending distribution facilities by the average embedded distribution cost, which is determined in every rate case on a class-by-class basis. Secondary demand customers currently qualify for a credit of \$ 118.55 / kW and primary customers receive an allowance of \$ 108.12 / kW. The revenue-based extension allowance proposed as part of the Commercial EV Program ties the allowance to the expected incremental demand revenue from the expected EV charger load. The allowance formula calculates an allowance such that the levelized annual revenue requirement of the investment necessary to serve the increased load equals the annual incremental distribution demand revenues from the increased load. Table 6 below compares the two allowance approaches for a hypothetical 200 kW of new demand for a Cp 1 customer, while table 7 below compares the two allowance approaches for a hypothetical 200 kW of new demand for a Cg 3 customer

**Table 6 - Comparison of Allowance Approaches - Cp 1**

	<b>Embedded Cost</b>	<b>Revenue-Based</b>
Maximum Allowance / kW	\$ 108.12	\$ 276.36
Allowance (\$ / kW X 200 kW)	\$ 21,624	\$ 55,271
Distribution Demand Charge \$ / kW	\$ 2.25	\$ 2.25
Annual Distribution Revenues (\$ / kW X 200 kW X 12)	\$ 5,400	\$ 5,400
Annual Revenue Requirement (Allowance x LARR)	\$ 2,113	\$ 5,400
Annual Distribution Revenues	\$ 5,400	\$ 5,400

**Table 7 - Comparison of Allowance Approaches - Cg 3**

	<b>Embedded Cost</b>	<b>Revenue-Based</b>
Maximum Allowance / kW	\$ 118.55	\$ 313.20
Allowance (\$ / kW X 200 kW)	23,710	62,641
Distribution Demand Charge \$ / kW	\$ 2.55	\$ 2.55
Annual Distribution Revenues (\$ / kW X 200 kW X 12)	\$ 6,120	\$ 6,120
Annual Revenue Requirement (Allowance x LARR)	\$ 2,316	\$ 6,120
Annual Distribution Revenues	\$ 6,120	\$ 6,120

The revenue-based allowance is designed to be recovered through incremental demand revenue from the customer's increased load. Therefore, there should be no cross-subsidization of the customer by non-participating customers. However, if after two years of receiving a revenue-based extension allowance under the Commercial EV Program a customer's actual incremental load is lower than the estimate on which the allowance was calculated by more than 25%, the customer would have to refund a portion of the allowance, including any rebate received,

proportional to the amount of incremental load that has not occurred. This refund component reduces the risk of cross-subsidization due to mismatches between the estimated load and revenues that underlie the revenue-based allowance and actual incremental load and revenues. In addition to this “safety valve,” Wisconsin Electric anticipates that non-participating customers will benefit – or at least be held harmless – because the Commercial EV Program is expected to encourage incremental load on the system. This incremental load will lower costs for all customers because Wisconsin Electric’s distribution and generation costs will be spread over a greater number of units in the form of kWh sales.

d. Make-ready equipment

Customers participating in the commercial EV pilot will be eligible for utility-funded rebates deferred into a regulatory asset for recovery in future rates to offset the cost of the “make-ready” equipment on the customer’s side of the meter needed to support the installation of commercial grade EV chargers. The amount of the rebate available to each customer will necessarily vary, but will be capped at the lower of (1) the portion of the extension allowance that is not first applied to the utility’s service extension costs or (2) the actual reasonable cost of the make-ready equipment. Thus, the rebates will not result in cross subsidization between customers.

This aspect of the Company’s proposed Commercial EV Pilot Program is also different than the NSPW program, which provided customers the option of having the utility install, own and maintain the make ready equipment, which includes service panels, conduit, wiring and other equipment. Unlike a utility-owned charger, which can be easily removed from a customer’s premises, make ready equipment effectively becomes part of the customer’s premises. Such equipment is more difficult for the utility to maintain and creates the risk of liability for damage to the customer’s property. Despite this difference, Wisconsin Electric’s rebate approach will further the Commission’s policy objectives of Docket 5-EI-156 by reducing the up-front costs for businesses converting their fleets to EVs and thus stimulate such conversions.

e. Optional EV charger service

Wisconsin Electric will offer commercial customers the same charger options as the NSPW commercial EV program, including access to high speed chargers. Commercial customers will have the option of having Wisconsin Electric provide EV chargers and either pre-paying for the chargers based on Wisconsin Electric’s cost or paying for them over time through a monthly charge. Wisconsin Electric will offer commercial customers single port or dual port chargers, three different pricing levels for each based on charging equipment and vendor (for a total of six options for equipment and price). This pricing will be developed through an RFP to secure competitive pricing for chargers and installation. The Company will ensure that any chargers selected through the RFP process comply with all technical standards required in Docket 4220-TE-104, including the additional specifications suggested by ChargePoint and ultimately adopted by the Commission. Wisconsin Electric will also make higher speed chargers to customers with the same payment options on an individual contract basis.

f. Communications

Wisconsin Electric will use all of its normal channels of communications to make commercial customers aware of the Commercial EV Program and its various benefits, as discussed in connection with the residential programs, above. For larger customers, those channels include the Company's Account Managers.

g. Load Management

The EV chargers provided in the Commercial EV Program will allow customers to schedule charging during off-peak hours when electric rates are lower.

h. Reporting

Wisconsin Electric will provide annual reporting for the Commercial EV Program in accordance with the Commission's order in Docket 4220-TE-104, including reporting on the following:

- Number of customers participating in revenue-based extension rules, including each customer's estimated load, total allowances, customer contributions, and total extension costs for distribution extension and make-ready equipment with a comparison to current extension rules;
- When actuals are available, the annual reports shall include a comparison of actual and estimated load showing how distribution revenues relate to the revenue-based distribution allowance;
- Number of customers under each of the optional charger service options;
- The number of customers who do not meet their anticipated load level within two years and who receive a true-up, the number of customers who do not pay the true-up bill prior to Wisconsin Electric writing it off and the amounts Wisconsin Electric writes off after approximately 180 days, and the amount of bills issued to customers at the end of the two-year true-up period.

i. Accounting and regulatory treatment

The distribution extension costs incurred by Wisconsin Electric under the Commercial EV Program, including make-ready infrastructure costs, will have the same accounting treatment as investments made under current extension rules. Extension costs will be added to rate base in the appropriate FERC account and offset by customer contribution in aid of construction. If the customer is required to refund a portion of the revenue-based extension allowance because of a shortfall in the expected incremental load, the refund will be accounted for as additional customer contribution in aid of construction offsetting rate base and a reduction to the regulatory asset, if appropriate, proportionately to how the revenue-based allowance was allocated when the customer took service under this proposed program.

The costs of purchasing and installing the charging and metering equipment for the Commercial EV Program will be capitalized as electric distribution plant in FERC Account 101, Plant in Service, and in plant account 371 Installations on customers' premises. Wisconsin Electric will request in its next rate filing that these capitalized costs be allowed in rate base. If a customer chooses to prepay for a charger, it will be recorded in Wisconsin Electric's property records with a value of \$0.

The Company's proposed monthly charge will include the cost of monthly maintenance of the charging equipment as well as the installed cost of the charger for customers electing the Bundled Option. For customers electing the Prepaid Option for the installed cost of the charger, the monthly fee will include only the cost of charger maintenance.

Except for the rebates to offset make ready costs addressed above, Wisconsin Electric is not seeking deferral treatment of the costs of the proposed Commercial EV Pilot Program. Specifically, any rebates that are provided to participating commercial customers would be deferred into a regulatory asset (FERC Account 182.3) using groups based on the year each rebate was provided for the purpose of amortization rather than accounting for the amortization of each rebate independently. A specific sub-account within account 182.3 would be used that specifically identifies these customer EV pilot rebates. This regulatory asset will be amortized to a specific sub-account within FERC Account 407.3.

Wisconsin Electric also proposes to work with Commission Staff to develop additional accounting procedures to ensure that program costs and revenues are appropriately tracked and that there is no cross-subsidization from non-participating customers. This is consistent with the Commission's order in Docket 4220-TE-104.

j. Administrative Code waiver requests

Wisconsin Electric seeks the same administrative code provision waivers relating to billing, customer complaints, and metering requirements as were granted to NSPW in Docket 4220-TE-104, including some subparts of Wis. Admin. Code PSC §§ 113.1005(1) and 113.1008(3), along with the corresponding waivers to Wisconsin Electric's existing tariffs, as necessary for implementation of the Commercial EV Program, in particular the revenue-based extension allowance. To the extent the Commission identifies any other sections of the administrative rules or Wisconsin Electric's tariffs that conflict with its proposal, the Company requests that the Commission waive those provisions as well.

### **III. Low Income Program**

While the increased availability and popularity of EVs and their great potential to contribute to the reduction of carbon emissions are exciting developments, Wisconsin Electric recognizes that these new technologies and their benefits are not equally available to all customers, primarily because of their currently high cost. In order to expand the availability of the benefits of EVs to lower income customers and underserved areas of the Company's service territory, Wisconsin Electric proposes several program alternatives the Company is willing to pursue with the Commission's approval:



- **Utility investments in charging infrastructure for municipal fleets and public transit.** The Company would work with municipalities in its service territory to install the distribution system upgrades and utility-owned charging infrastructure (chargers and customer-side make ready equipment) to support electrified municipal fleet and public transit vehicles, with the focus on investments in underserved areas.
- **Utility investments in EV charging hubs.** The Company would work with municipalities, school districts and non-profit agencies to site and build utility-owned EV charging hubs for public use, with the focus on investments in underserved areas. These could be located at public transit stations, ridesharing locations and/or large multi-family residential areas.
- **Utility-funded rebates to promote EV investments.** The Company would commit utility funds to be deferred and recovered in future rates for rebates to governmental and non-governmental customers to offset the cost of charging and make ready equipment installed at certain locations, such as multi-family residential areas, workplaces, fast charging sites and public transit facilities, with the focus on underserved areas.
- **Using earning sharing dollars to advance EV investment in underserved areas.** The Company would use earnings sharing funds that would otherwise be returned to customers to fund the rebates described immediately above.

The Company seeks review and input on these program alternatives from the Commission and stakeholders. Through this combined effort, we can bring the benefits of electrified transportation to underserved areas in eastern Wisconsin.